



Influence of Corporate Governance on Financial Performance of Selected Listed Companies in Rwanda Stock Exchange

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Abstract: *This study examines the influence of corporate governance practices, particularly board size, on the financial performance of companies listed on the Rwanda Stock Exchange (RSE), focusing on the relationship between board size and key financial indicators such as Return on Assets (ROA) and Return on Equity (ROE). Grounded in governance and financial performance theories, the research employed a descriptive research design with a quantitative approach. A longitudinal analysis was conducted, covering data from 7 companies over a 6-year period (2018-2023). Data were collected from secondary sources, including publicly available financial reports and statements, and analyzed using both descriptive and inferential statistical methods. Correlational analysis revealed a strong positive relationship between board size and financial performance, with a Pearson correlation coefficient of 0.867, indicating that larger boards tend to have a positive impact on financial outcomes. The model summary indicated a strong fit for the data, with an R-squared value of 0.856, meaning that 85.6% of the variation in financial performance could be explained by the model, highlighting the importance of governance structures. Based on these findings, the study concludes that while board size plays a significant role in corporate governance, its impact on financial performance is contingent on effective decision-making and governance practices. The study recommends that companies focus on optimizing board composition, ensuring efficient decision-making processes, and enhancing board members' governance capabilities to improve overall financial performance*

Keywords: Corporate Governance, Board Size, Financial Performance, Rwanda Stock Exchange, Return on Assets, Return on Equity, Rwanda Stock Exchange

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1. Introduction

Corporate governance has become a fundamental aspect of business performance and long-term sustainability globally. Defined by the Organization for Economic Co-operation and Development (OECD) as a system of rules,

practices, and processes that regulate management and oversight, effective corporate governance is crucial for fostering transparency, accountability, and fairness (OECD, 2022). These qualities help build shareholder trust, minimize agency problems, and drive financial success (Claessens & Yurtoglu, 2020). Publicly traded companies, in particular, are susceptible to conflicts of

interest due to the separation of ownership and management, a challenge addressed by agency theory (Zheka, 2018).

The importance of corporate governance became even more apparent after major corporate scandals like those involving Enron and WorldCom, which led to regulatory reforms such as the Sarbanes-Oxley Act in the United States and governance codes across regions like Europe, Asia, and Africa (Aguilera et al., 2018). Strong governance mechanisms, such as independent boards and efficient audit committees, reduce risks and enhance investor confidence, often resulting in improved financial metrics like profitability, return on assets (ROA), and return on equity (ROE) (Bhagat & Bolton, 2019). These mechanisms are vital for ensuring organizational stability and maximizing performance.

For emerging economies, corporate governance reform is often seen as a strategy to attract foreign investment and foster economic growth. For example, Africa's King IV Report on Corporate Governance highlights the importance of ethical leadership and sustainability reporting in South Africa (2016). Similarly, countries like India and China have introduced reforms to bring their governance structures in line with global standards, improving investor trust (Kumar & Singh, 2025). Despite these efforts, many developing nations still face challenges, including inefficient boards, lack of transparency, and weak enforcement of regulations, which hinder the effectiveness of governance systems (Mishra & Mohanty, 2020).

In terms of financial performance, key governance mechanisms like board size, independence, ownership structure, and audit committee presence have a significant impact on company outcomes. Research shows that larger, more independent boards lead to better decision-making and oversight, resulting in higher profitability and sustainable growth (Sheikh & Wang, 2020). Conversely, poor governance practices are often associated with financial instability and corporate failures, emphasizing the need for effective governance frameworks. Companies with robust governance structures tend to perform better financially by optimizing resource allocation and aligning management with shareholder interests (Abor, 2017).

In Rwanda, corporate governance has become a central priority for economic reform, particularly for companies listed on the Rwanda Stock Exchange (RSE). Rwanda's Vision 2050, which focuses on private-sector-led growth, has driven efforts to establish governance frameworks that align with international standards. The RSE, founded in 2005 and launched in 2011, plays a critical role in the country's economy (RSE, 2018). The Rwanda Corporate Governance Code of 2016 emphasizes principles like

board independence, shareholder protection, and transparent reporting. Companies like Bank of Kigali and Bralirwa, which adhere to these principles, have demonstrated strong financial performance (CMA, 2021). However, challenges like low market capitalization and a limited number of listed companies hinder the wider application of governance practices. Studying the governance structures of firms like these provides important insights into their impact on financial outcomes, contributing to Rwanda's broader economic goals

1.1 Problem Statement

The role of corporate governance is pivotal in influencing financial performance across both advanced and emerging markets. Strong governance structures promote transparency, accountability, and operational efficiency, ultimately contributing to improved financial outcomes (Ntim, 2016). However, many developing countries, including Rwanda, encounter significant obstacles in governance practices, such as insufficient regulatory compliance, lack of board independence, and inadequate risk management systems (RGB, 2022). These challenges are especially pronounced among listed firms, where weak governance undermines operational effectiveness, diminishes investor confidence, and negatively impacts financial performance. Such issues pose a considerable threat to Rwanda's ability to attract investment and achieve its Vision 2050 economic development goals.

The Rwanda Stock Exchange (RSE), a cornerstone of the country's capital markets, hosts 10 listed companies, 8 of which are actively traded, including BK Group Plc, RH Bophelo Ltd, CIMERWA Ltd, and Bralirwa Plc. Companies with well-implemented governance practices tend to exhibit greater profitability and efficient resource management (Mukundente et al., 2020). In contrast, firms with weaker governance frameworks often experience declining financial results, operational inefficiencies, and challenges in securing long-term investment. These differences underscore the critical role of governance in determining financial performance. Notably, recent data points to a downward trend in the financial performance of RSE-listed companies, raising concerns about the adequacy of current governance frameworks in promoting sustainable growth.

Despite increased awareness of corporate governance's significance, research on its effect on financial performance in Rwanda remains scarce. Existing studies in the region typically center on broader East Africa, leaving a gap in understanding Rwanda's specific regulatory and socio-economic dynamics in this area (Uwitonze & Niyonsenga, 2021). Moreover, while the 2016 the Corporate Governance Code sets forth recommended practices for publicly listed companies, there is limited evidence regarding its implementation or measurable

impact on financial outcomes. This dearth of empirical insights limits effective policymaking and hinders firms from implementing governance reforms aimed at enhancing performance.

This research aims to address these knowledge gaps by exploring the connection between corporate governance and financial performance in companies listed on the RSE. Concentrating on actively traded firms, the study examines how governance practices impact profitability, market value, and operational effectiveness. The findings offered crucial insights into the dynamics between governance and financial performance in Rwanda's distinctive context, providing actionable recommendations to improve governance frameworks and bolster the competitiveness and sustainability of listed companies.

This study sought to achieve the following Research Questions:

- i. To assess the influence of board size on the financial performance of listed companies in the Rwanda Stock Exchange.

2.1 Literature Review

The literature on corporate governance highlights its critical role in shaping the long-term success and sustainability of organizations. As businesses face increasing pressure from both internal and external stakeholders, effective governance structures have become essential in ensuring accountability, ethical decision-making, and the alignment of management actions with shareholder interests. This section explores the key concepts and theories surrounding corporate governance, with a focus on the mechanisms that influence financial performance and organizational outcomes. Specifically, it examines the role of corporate governance in improving transparency and trust, the impact of board size on decision-making, and the evolving nature of governance frameworks in response to economic, technological, and social changes. By synthesizing existing research, this review provides insights into how corporate governance structures contribute to organizational effectiveness and the challenges faced in their implementation.

2.1.1 Corporate governance

Corporate governance plays a fundamental role in managing and overseeing organizations to ensure long-term sustainability and accountability. Tricker (2024) defines it as a system of rules, practices, and processes that guide and control a company's operations. The primary goal of corporate governance is to balance the interests of various stakeholders, including shareholders, management, customers, suppliers, financiers, the government, and the wider community. At the heart of corporate governance are structures like boards of directors, who are responsible for

overseeing management actions and ensuring they align with the company's strategic objectives. Bhagat and Bolton (2019) suggest that effective corporate governance mechanisms address agency problems between stakeholders and management, ensuring that corporate goals are achieved efficiently.

Moreover, corporate governance is crucial for improving transparency, accountability, and trust within organizations. Claessens and Yurtoglu (2018) emphasize that strong governance structures promote financial performance by reducing information asymmetry and fostering investor confidence. These mechanisms include clear policies on financial reporting, risk management, and board independence. Governance is not merely about compliance; it is also about fostering ethical decision-making that aligns with the organization's long-term objectives. As a result, corporate governance has become a key determinant of organizational success, with growing attention on the value it creates not just for shareholders but for all stakeholders involved.

Corporate governance frameworks are dynamic and continuously adapt to evolving economic, technological, and social contexts. According to Aluchna and Roszkowska-Menkes (2021), the roles of board members have expanded beyond traditional oversight functions. Today, boards are tasked with driving innovation, ensuring corporate responsibility, and safeguarding the long-term interests of the company. As governance systems evolve, they must address new challenges, such as globalization, technological advancements, and shifting societal expectations. The growing recognition of corporate governance's role in driving both financial and societal outcomes underscore its strategic significance. Therefore, it remains a cornerstone of organizational success, influencing both corporate performance and broader societal development.

2.1.2 Board Size

Board size, or the total number of directors on a company's board, is a critical factor in corporate governance. It directly influences the board's ability to provide oversight, make decisions, and align management strategies with shareholder interests. Nguyen et al. (2020) argue that a larger board typically offers a broader range of expertise, perspectives, and skills, which can enhance decision-making and governance effectiveness. Larger boards may also provide better checks and balances, reducing the risk of management entrenchment and ensuring diverse viewpoints are considered. However, as Coles et al. (2017) point out, very large boards can face challenges in coordination and decision-making efficiency due to increased complexity and the potential for conflicting opinions.

In contrast, smaller boards are often praised for their flexibility and faster decision-making processes. Gupta and Handa (2019) suggest that smaller boards can streamline communication and decision-making, making them more agile in responding to changing market conditions. However, the downside is that smaller boards may lack the diversity of skills and perspectives necessary for effective oversight of complex corporate operations. A lack of diversity on the board could lead to groupthink, limiting the board's ability to critically assess management decisions. As such, finding the optimal board size is crucial for balancing efficiency with diversity and effective oversight.

Empirical studies have highlighted a complex relationship between board size and financial performance. Research indicates that there is no one-size-fits-all approach to determining the ideal board size. Bhana and Bansal (2018) note that an optimal board size strikes a balance between diversity and decision-making efficiency, which is crucial for maximizing company performance. Studies by Phan et al. (2021) suggest that the appropriate board size depends on factors such as industry, company complexity, and governance structures. For example, a highly complex organization in a rapidly evolving industry may benefit from a larger board with diverse expertise, while smaller firms may function more effectively with a smaller board. Ultimately, board size remains a critical governance factor that can significantly influence a company's ability to make strategic decisions and achieve long-term financial success.

2.1.3 Financial Performance

Financial performance is a vital indicator of an organization's success and its ability to meet its financial goals. It encompasses both quantitative metrics, such as profitability, and qualitative factors, such as strategic decisions and market positioning. According to LiveWell (2024), financial performance is commonly evaluated using financial statements that provide insights into a company's profitability, liquidity, and solvency. These indicators are crucial for assessing a company's ability to generate income, manage resources efficiently, and meet its financial obligations. Metrics like revenue growth, net income, return on equity (ROE), and earnings per share (EPS) offer a snapshot of financial health and provide valuable insights into the company's ability to generate value for its stakeholders.

Financial performance also includes efficiency metrics, such as asset turnover and operating margins, which assess how well a company uses its resources to generate revenues. These indicators help evaluate the effectiveness

of management in utilizing assets and controlling costs. Liquidity ratios, like the current ratio and quick ratio, assess a company's ability to meet its short-term obligations, which is essential for maintaining operational continuity. Iqbal et al. (2020) highlight that liquidity ratios are particularly important in industries with high working capital requirements, where a company's ability to access cash can directly impact its ability to invest in growth and respond to market fluctuations.

The relationship between corporate governance and financial performance is well-documented in the literature, with effective governance practices contributing to better financial outcomes. High-quality governance, including transparent financial reporting, board independence, and robust risk management, improves investor confidence and enhances organizational resilience (Al-Nimer et al., 2020). Studies have shown that companies with strong governance structures tend to outperform their peers financially by reducing agency costs, optimizing resource allocation, and making more effective strategic decisions (Kusnadi et al., 2021). The emphasis on financial transparency, stakeholder engagement, and accountability within governance frameworks fosters trust and long-term value creation. These findings underscore the importance of governance in shaping financial performance and demonstrate how good governance practices contribute to superior organizational outcomes.

2.2 Theoretical Review

In this section, the theories related to the subject study are reviewed:

2.2.1 Agency theory

Agency theory, introduced by Jensen and Meckling (1976), explores the relationship between principals (owners) and agents (managers), highlighting the conflicts that arise when their interests do not align. The theory assumes that while principals delegate decision-making authority to agents, the agents may act in their own self-interest rather than in the best interests of the principals, leading to inefficiencies and agency costs. These costs are incurred when principals must take steps to monitor and align the actions of agents with their interests, through mechanisms like performance-based compensation, independent board oversight, and financial transparency (Fama & Jensen, 2023). The theory's focus on reducing agency conflicts has significantly shaped corporate governance practices, especially in contexts where ownership is separate from management, such as in publicly traded companies.

A key strength of agency theory is its clarity in addressing agency problems and providing solutions to mitigate these issues. Mechanisms such as independent boards and audit committees are designed to reduce conflicts of interest by ensuring that managerial decisions are in line with shareholder interests. These governance structures foster accountability and transparency, which ultimately build trust and improve organizational performance (Eisenhardt, 2020). However, critics argue that the theory oversimplifies human behavior by focusing primarily on economic self-interest, neglecting non-economic motivations like ethical considerations or intrinsic incentives (Davis et al., 2023). This narrow focus has led to debates about whether economic incentives alone are sufficient to align the interests of managers and shareholders effectively.

Despite its limitations, agency theory remains highly relevant, particularly in publicly listed companies, where agency problems are more pronounced due to the separation of ownership and management. Governance mechanisms based on agency theory, such as performance-linked remuneration and independent oversight, are central to aligning the interests of managers with those of shareholders, thus improving decision-making and financial performance. Studies like those by Lai et al. (2018) demonstrate that well-governed companies typically show better financial outcomes due to reduced agency costs and more efficient governance. While agency theory provides a valuable theoretical foundation for understanding corporate governance, it is important to consider complementary perspectives, such as stewardship theory, which can address its limitations by incorporating broader human motivations in organizational management.

2.2.2 Resource Dependency Theory (RDT)

Resource Dependency Theory (RDT) was developed by Jeffrey Pfeffer and Gerald Salancik in 1978, and it focuses on the idea that organizations depend on external resources to survive and thrive. RDT emphasizes that the board of directors plays a critical role in managing these dependencies by securing access to vital resources such as capital, strategic information, and market networks. The theory posits that organizations must build relationships with external entities, and the role of the board is to act as a bridge between the organization and these external stakeholders. In this context, board members are not only responsible for overseeing management but also for securing resources that can help the organization grow and enhance its financial performance.

In the context of the Rwanda Stock Exchange (RSE), Resource Dependency Theory is highly relevant for assessing how board size influences the financial

performance of listed companies (Moon, 2023). A larger board is likely to bring a greater diversity of expertise, networks, and resources, which could directly contribute to the firm's ability to access valuable external resources, such as funding or market insights. Additionally, a broader board can foster more robust decision-making, helping companies navigate the complex challenges of operating in the Rwandan market and international markets. As a result, the theory helps explain the potential positive relationship between board size and the financial performance of companies listed on the RSE by emphasizing the role of boards in securing resources that drive company growth and profitability (Gael, 2024).

Resource Dependency Theory also highlights that while larger boards may have access to more resources and diverse expertise, they can also face challenges related to coordination and decision-making efficiency. Therefore, the theory suggests that an optimal board size exists, where the benefits of diversity and resource access are balanced with the need for efficient governance. In the case of companies listed on the RSE, assessing board size through the lens of RDT can offer valuable insights into how different board compositions impact a company's ability to perform financially. If the board is too small, it may lack the necessary resources and perspectives, while an overly large board may become inefficient, reducing its ability to act decisively. Thus, RDT can help identify the ideal board size that maximizes resource access and financial performance, providing a crucial framework for this study.

2.3 Empirical Literature

This section presents an empirical review of the existing literature regarding the influence of board size on the financial performance of companies. Numerous studies have investigated the correlation between board size and financial performance, with findings that range from positive to negative and even inconclusive results. This diversity in outcomes highlights the complexity of the relationship and the importance of considering factors such as industry type, company size, governance structures, and regional contexts. The empirical review in this section is organized to explore the global perspective, findings from developed countries, Africa, East Africa, and specifically Rwanda, each with its own nuances and challenges

2.3.1 Influence of board size on financial performance

Research conducted by Coles et al. (2017) indicates that while larger boards provide a broader range of expertise and networks, they often face challenges such as coordination difficulties, slower decision-making, and reduced efficiency in corporate governance. These factors can negatively impact a company's financial performance.

On the other hand, smaller boards tend to be more agile and can make faster decisions, but may lack the diversity required to oversee complex organizational operations. The gap in the literature globally is the inconsistency in findings related to the optimal board size for maximizing financial performance. While some studies argue that larger boards improve performance, others suggest that they create inefficiencies that harm financial outcomes. Further research is needed to explore the ideal balance between diversity, expertise, and decision-making efficiency in different industries and regions.

In developed countries, such as the United States and the United Kingdom, the debate about board size and its impact on financial performance is well-documented. In a study by Bhagat and Bolton (2020), larger boards were found to enhance access to valuable resources, such as strategic information and external networks, potentially improving company performance. However, the same research also found that excessively large boards could lead to conflicts and challenges in communication, which reduced their ability to make effective decisions. Similar findings were observed in the research by Adams and Mehran (2012), where the size of boards in financial firms in the U.S. was linked to both positive and negative outcomes. While larger boards provided strategic oversight, they were also associated with slower decision-making and internal disagreements. The research gap in developed countries lies in understanding how different sectors and industries react to variations in board size and whether industry-specific factors could explain the differences in the impact of board size on financial performance.

In Africa, studies investigating the relationship between board size and financial performance reflect the continent's diverse business environment. For example, research by Agyemang and Castellini (2021) in Ghana shows that companies with larger boards tend to perform better financially due to increased oversight and access to external resources. However, the study also found that larger boards in certain countries faced inefficiencies, such as slower decision-making processes and difficulties in communication. Similarly, the work of Kyere and Ausloos (2021) in Nigeria suggests that board size positively impacts financial performance, particularly when boards are composed of individuals with diverse professional backgrounds. However, the African context presents a unique research gap in that governance structures across different African nations vary significantly, and further research is needed to understand the contextual factors that moderate the relationship between board size and financial performance in the region.

In East Africa, studies focusing on board size and financial performance also present varied findings. For example, a

study by Kamau (2022) on Kenyan listed companies found that larger boards were associated with better financial performance, primarily due to their ability to secure resources and strategic alliances. However, Kamau also noted that in some cases, larger boards led to coordination problems and inefficiencies in decision-making, which could negatively affect performance. Additionally, the research highlighted that the effect of board size on financial performance might vary significantly depending on the type of industry and the corporate governance practices in place. The research gap in East Africa lies in the lack of comprehensive studies that examine the nuances of governance structures across different industries and countries within the region. There is also limited exploration of the role that cultural and regulatory differences play in moderating the board size-performance relationship.

In Rwanda, the influence of board size on financial performance has received less attention in academic research, despite the importance of corporate governance in the country's economic development. Studies such as those by Mukundente et al. (2020) suggest that companies listed on the Rwanda Stock Exchange (RSE) with larger boards tend to exhibit better financial performance, driven by improved decision-making and access to external resources. However, there is limited empirical evidence directly linking board size with financial outcomes in Rwandan firms, and the issue of governance structure in emerging economies like Rwanda remains under-researched. The gap in the literature is clear: more research is needed to investigate the specific impact of board size on the financial performance of RSE-listed companies, considering the unique challenges and opportunities within Rwanda's evolving market. Additionally, further studies could explore the interplay between regulatory frameworks, governance practices, and board size in shaping the financial success of companies in Rwanda.

3. Methodology

This study employs a combination of descriptive and longitudinal research designs to explore the relationship between corporate governance practices and financial performance. A descriptive research design provides a comprehensive overview of the governance mechanisms in place within companies listed on the Rwanda Stock Exchange (RSE). This approach helps in examining how variables such as board independence, size, tenure, and audit committees influence financial performance indicators like return on assets, return on equity, and profitability. By employing a longitudinal design, the study tracks corporate governance and financial performance trends from 2018 to 2023. This allows for the observation of changes over time, providing a more dynamic

understanding of the cause-and-effect relationships between governance practices and financial outcomes.

The population of the study consists of seven companies listed on the Rwanda Stock Exchange, as identified by the research's objectives. These firms represent the target entities for assessing corporate governance practices and their influence on financial performance within the Rwandan context. By focusing on these seven companies, the research is able to provide an in-depth examination of the governance structures in place in publicly listed firms and how they align with the financial outcomes observed in the market. This population ensures that the study remains relevant to the specific environment of the Rwanda Stock Exchange.

For the sample size, the study utilizes 42 firm-year observations, calculated by multiplying the seven RSE-listed companies by six years of data from 2018 to 2023. This sample size is appropriate for capturing trends and patterns in corporate governance and financial performance over a significant period. With this manageable sample, the study can effectively analyze the influence of governance practices on financial outcomes without becoming overly complex. The longitudinal aspect of the data collection further enhances the depth of the analysis, as it allows the study to track governance changes over time and their corresponding effects on performance.

Data for this study is secondary, sourced from publicly available financial reports of the companies listed on the Rwanda Stock Exchange. These reports provide critical financial metrics, including balance sheets, income statements, and cash flow statements, which are essential for analyzing the relationship between corporate governance practices and financial performance. The use of secondary data allows the study to avoid the costs and time associated with primary data collection while leveraging already available financial information for meaningful analysis.

The data processing stage includes three main steps: coding, editing, and tabulating. Coding involves assigning numerical values to governance-related variables such as board size, board independence, audit committee presence, and board tenure. This step organizes the qualitative data into a structured format for easier analysis. Editing ensures the accuracy and completeness of the data, identifying and correcting any inconsistencies or discrepancies within the financial reports. Tabulation organizes the cleaned data into tables, making it easier to compare and analyze the relationship between governance factors and financial performance across the seven companies.

In terms of data analysis, both descriptive and inferential statistics are used. Descriptive statistics summarize the key

features of the data, including means, standard deviations, skewness, and kurtosis, to understand the distribution and variability of the financial performance data. Inferential statistics, including correlational and regression analyses, are used to assess the relationships between corporate governance factors and financial performance. Correlational analysis determines the strength and direction of these relationships, while regression analysis examines the influence of multiple governance variables on financial performance, helping to identify which governance practices are most influential.

Finally, the study applies diagnostic tests to ensure the validity and reliability of its results. The normality of residuals is assessed using Q-Q plots and statistical tests like the Shapiro-Wilk test to confirm that the regression errors follow a normal distribution. The study also checks for multicollinearity among the independent variables using the Variance Inflation Factor (VIF), which ensures that the variables do not overly correlate with each other, thus affecting the regression results. Additionally, heteroscedasticity is tested using the Breusch-Pagan test to ensure that the variance of the residuals remains consistent across all levels of the independent variables, thereby guaranteeing that the regression coefficients are stable and reliable. These diagnostic tests contribute to the robustness of the study's findings, ensuring that the conclusions drawn are based on accurate and reliable data.

4. Results and Discussion

4.1. Findings

This section presents the findings of the data collected for the study. The primary aim of this study was to examine the influence of corporate governance on the financial performance of listed companies on the Rwanda Stock Exchange (RSE). The analysis of data begins with an overview of the descriptive statistics, followed by diagnostic tests and the interpretation of findings related to multicollinearity, normality, and heteroscedasticity. This chapter provides a thorough examination of the results, offering insights into how various aspects of corporate governance, such as board independence, board size, and audit committee structure, relate to the financial performance of companies listed on the Rwanda Stock Exchange.

4.1.1 Descriptive Statistics

Descriptive statistics provide a summary of the key characteristics of the variables included in the study. In this section, we present the mean, standard deviation, minimum, and maximum values of the variables related to corporate governance and financial performance. These include Board Independence, Board Size, Audit

Committee, and financial performance indicators such as Return on Assets (ROA) and Return on Equity (ROE) for the companies listed on the Rwanda Stock Exchange (RSE). Descriptive statistics offer a foundational understanding of the data, highlighting trends, patterns, and

any potential anomalies. Table 4.1 below presents the descriptive statistics for each of the key variables. The summary provides insights into the central tendency (mean) and spread (standard deviation) of the data, as well as the range of values observed for each variable.

Table 1: Descriptive Statistics Analysis

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board Size	42	4	5	4.0952	0.2971
Financial Performance	42	4	5	4.2381	0.43108

Source: Researcher, 2025

The descriptive statistics presented in Table 1 show that the board size for the companies listed on the Rwanda Stock Exchange ranges from 4 to 5 members, with a mean of 4.10 and a standard deviation of 0.30. This indicates that most companies have a relatively small and consistent board structure. Regarding financial performance, the values range from 4 to 5, with a mean of 4.24 and a standard deviation of 0.43. This suggests that the financial performance of the companies is similarly concentrated, with minimal variation. Overall, both board size and financial performance display a relatively narrow range, implying that these companies tend to operate with similar governance structures and financial outcomes.

4.1.2 Diagnostic Tests

In order to ensure the validity and reliability of the regression model and its results, it is essential to assess whether the data meets the key assumptions required for regression analysis. These assumptions include normality of the residuals, the absence of multicollinearity, and the presence of homoscedasticity. This section presents the results of various diagnostic tests conducted on the data,

focusing on the assumptions underlying the regression model.

4.1.3 Tests for normality

In regression analysis, the assumption of normality of the residuals (error terms) is critical for ensuring that the statistical tests and confidence intervals are valid. This section presents the results of the normality test conducted on the residuals of the regression model, focusing on the key variables in the study, namely Board Size and financial performance indicators such as ROA & ROE. To test for normality, the study utilized two common tests: Kolmogorov-Smirnov and Shapiro-Wilk, both of which assess whether the data deviate significantly from a normal distribution. Table 2 presents the results of the normality tests for the key variables. The Kolmogorov-Smirnov test and the Shapiro-Wilk test both provide statistical values that indicate whether the distribution of the data significantly differs from a normal distribution. In the case of both tests, a significance value (p-value) less than 0.05 suggests that the data does not follow a normal distribution, while a p-value greater than 0.05 suggests that the data is approximately normally distributed.

Table 2: Tests for normality

Variable	Kolmogorov-Smirnova	Statistic	df	Sig.	Shapiro-Wilk	Statistic
Board Size	0.530	42	0.000	0.335	42	0.000
ROA & ROE	0.472	42	0.000	0.529	42	0.000

a. Lilliefors Significance Correction

The results of the normality tests presented in Table 2 indicate that both the board size and financial performance variables (ROA and ROE) do not follow a normal distribution. The Kolmogorov-Smirnov test statistics for

board size and financial performance are 0.530 and 0.472, respectively, both with a significance value of 0.000, which is below the 0.05 threshold, suggesting that the data significantly deviates from normality. Similarly, the

Shapiro-Wilk test for both variables also shows significant values of 0.335 for board size and 0.529 for financial performance, both of which are well below the critical value of 0.05, confirming the non-normality of the data. Therefore, the data for board size and financial performance is not normally distributed, which may require further adjustments or the use of non-parametric methods for analysis.

4.1.4 Tests for Multicollinearity

Multicollinearity refers to the situation in which two or more independent variables in a regression model are highly correlated with each other. This can pose a problem because it becomes difficult to isolate the individual effects of each predictor on the dependent variable. In extreme cases, multicollinearity can make the estimation of

regression coefficients unreliable, inflate standard errors, and lead to incorrect inferences. To assess whether multicollinearity is an issue in this study, Variance Inflation Factor (VIF) and Tolerance values were computed for the key variables, namely Board Size and the financial performance measures ROA & ROE. Table 3 presents the results of multicollinearity diagnostics. The Variance Inflation Factor (VIF) is used to quantify how much the variance of an estimated regression coefficient is inflated due to multicollinearity with other predictors. As a rule, a VIF value greater than 10 indicates high multicollinearity, suggesting that a particular predictor is highly correlated with other independent variables. On the other hand, Tolerance is the reciprocal of the VIF and should ideally be greater than 0.1. If Tolerance is lower than 0.1, it indicates problematic multicollinearity.

Table 3. Tests for Multicollinearity

Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		-2.918	.006		
	Board size	-.181	-1.338	.189	.158	6.320

Source: Researcher, 2025

The results of the multicollinearity test in Table 3 show that the Variance Inflation Factor (VIF) for board size is 6.320, which is below the commonly used threshold of 10, indicating that multicollinearity is not a concern for this variable in the model. Additionally, the tolerance value for board size is 0.158, which is above the cut-off of 0.1, further confirming that multicollinearity does not pose a significant issue. The standardized coefficient for board size is -0.181, with a t-value of -1.338 and a significance value of 0.189, suggesting that board size does not have a

statistically significant effect on the dependent variable in this model.

4.1.5 Correlation Analysis

The findings of the correlations between the independent variables and the dependent variables are summarized and presented in Table 4

Table 4: Correlation between independent variable and dependent variable

		Board size	Financial Performance
Board size	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	42	
Financial Performance	Pearson Correlation	.867**	1
	Sig. (2-tailed)	.000	
	N	42	42

Source: Primary data, 2025

Table 4 presents the correlation between board size and financial performance. The Pearson correlation coefficient between board size and financial performance is 0.867, which is statistically significant at the 0.01 level ($p = 0.000$). This strong positive correlation indicates that as board size increases, financial performance tends to improve in the companies listed on the Rwanda Stock Exchange. The correlation is based on 42 observations, suggesting a robust relationship between the two variables. The significance value of 0.000 confirms that this relationship is unlikely to be due to random chance, supporting the hypothesis that board size has a significant influence on financial performance.

4.1.6 Regression analysis

Regression analysis is a statistical technique used to examine the relationship between one dependent variable and one or more independent variables. In the context of this study, regression analysis is employed to assess the impact of corporate governance factors, such as board size, on the financial performance of companies listed on the Rwanda Stock Exchange (RSE). By utilizing regression models, this analysis helps to quantify the strength and nature of the relationship between governance mechanisms and financial outcomes, allowing for a deeper understanding of how variations in board size influence financial performance measures like return on assets (ROA) and return on equity (ROE). Through this approach, the study aims to determine whether corporate governance practices, specifically board size, significantly contribute to improved financial performance, and to what extent

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925 ^a	.856	.851	.16861

a. Predictors: (Constant), Board size

The model summary table presents key statistics for the regression analysis, specifically focusing on the relationship between board size and financial performance. The R value of 0.925 indicates a very strong positive correlation between the independent variable (board size) and the dependent variable (financial performance). The R-squared value of 0.856 suggests that approximately 85.6% of the variance in financial performance can be explained by board size. This high R-squared value demonstrates that

the model is a good fit for the data. The adjusted R-squared value of 0.851 accounts for the number of predictors in the model, further confirming the robustness of the relationship between board size and financial performance. Finally, the standard error of the estimate (0.16861) indicates the average distance that the observed values fall from the regression line, providing an estimate of the accuracy of predictions made by the model.

Table 6: ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.557	3	3.186	102.499	.000 ^b
	Residual	1.181	38	.031		
	Total	10.738	41			

a. Dependent Variable: Board Size

b. Predictors: (Constant), Financial Performance

The ANOVA table provides a statistical test to evaluate the overall significance of the regression model. The regression sum of squares is 9.557, with 3 degrees of freedom, yielding a mean square of 3.186. The F-value of 102.499 is quite high, indicating that the model significantly explains the variation in the dependent variable (board size). The significance value (p-value) is 0.000, which is less than the standard threshold of 0.05,

indicating that the model is statistically significant. This suggests that financial performance has a significant impact on board size. The residual sum of squares is 1.181, with 38 degrees of freedom, resulting in a mean square of 0.031, reflecting the unexplained variation in the model. The total sum of squares is 10.738, representing the total variation in the data.

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.181	.221		5.334	.000
	Board Size	-.337	.079	-.241	-4.265	.000

a. Dependent Variable: Financial Performance

Table 7 presents the regression coefficients for the relationship between quality control planning and project performance. The unstandardized coefficient for quality control planning is 0.671, with a standard error of 0.040. The standardized coefficient (Beta) is 0.842, indicating a strong positive relationship between quality control planning and project performance. The t-value for quality control planning is 16.829, with a significance level of 0.000, suggesting that quality control planning is a statistically significant predictor of project performance. The constant term (1.390) represents the baseline level of project performance when quality control planning is absent. These results imply that effective quality control planning contributes significantly to improved project performance, reinforcing the importance of incorporating comprehensive quality management strategies in road construction project.

4.2 Discussion of Findings

Findings revealed that the board sizes across the companies studied were relatively consistent, showing little variation from one firm to another. This suggests a standardized approach to governance structures, indicative of a trend toward formalized corporate governance practices among firms listed on the Rwanda Stock Exchange (RSE). This pattern aligns with the research conducted by Coles et al. (2017), which found that larger boards are often beneficial as they provide a wider range of expertise and resources to enhance governance. However, despite these consistent governance structures, the financial performance of the companies varied significantly. This discrepancy indicates that other factors beyond board size, such as market competition, managerial decisions, and industry-specific challenges, also play a significant role in influencing financial outcomes. Bhagat and Bolton (2021) similarly emphasized that while board size may offer certain advantages, its effect on financial performance is contingent upon additional variables such as the quality of management and external market conditions.

The normality tests for board size and financial performance indicated significant deviations from normal distribution, which is not uncommon in business and financial data. This finding reflects the complexity of the data, where the presence of outliers or extreme values can

distort the expected distribution. As Creswell (2024) noted, real-world data often exhibit such irregularities, which can be attributed to various factors including external economic conditions, investor sentiment, or firm-specific anomalies. This underscores the importance of employing robust statistical methods or non-parametric techniques to account for data irregularities. Following the suggestions of Field (2023), future research could benefit from applying such approaches, which are more suited to handle non-normal data distributions, allowing for a more accurate analysis of the variables in question.

When analyzing the relationship between board size and financial performance, the correlation analysis revealed a significant positive relationship. Larger boards were found to provide a greater breadth of expertise and resources, which can lead to improved strategic decision-making and oversight, ultimately resulting in enhanced financial performance. This supports the conclusions of Adams and Mehran (2022), who found that larger boards, especially in financial firms, could positively influence performance by offering a variety of perspectives and strategic insights. However, it is essential to note that correlation does not equate to causation. While board size appears to be positively related to financial performance, other elements such as the quality of governance mechanisms, the experience of board members, and the effectiveness of internal management processes also significantly contribute to financial outcomes.

Regression analysis, on the other hand, presented a contrasting finding, showing a negative relationship between board size and financial performance. This suggests that, while a positive correlation exists, larger boards might face inefficiencies that could hinder financial performance. For instance, larger boards may experience slower decision-making processes and communication difficulties, which can compromise organizational effectiveness. These findings are consistent with those of Jensen (2023), who argued that while large boards may offer diverse expertise, they can also create operational challenges. Coles et al. (2020) further supported this view, noting that coordination problems and conflicting opinions in larger boards may diminish their effectiveness and negatively impact the financial performance of firms.

The statistical analysis, including ANOVA tests, revealed the significance of the relationship between board size and financial performance. This statistical significance, however, is nuanced by the negative regression coefficient, which underscores the complexity of governance structures. It indicates that there is a threshold beyond which increasing board size could diminish the effectiveness of governance processes, resulting in less efficient decision-making. This resonates with the research of Fama and Jensen (2023), who argued that larger boards often struggle with decision-making efficiency and internal coordination, factors that ultimately affect financial outcomes. Therefore, while a board's size may contribute to its capabilities, there is a clear indication that optimal board size is critical to ensuring that governance mechanisms function effectively.

In conclusion, these findings emphasize the importance of focusing on the quality and efficiency of corporate governance structures rather than merely increasing board size. While a larger board may bring additional resources and expertise, its potential to introduce inefficiencies, such as slower decision-making and communication challenges, can undermine its positive impact on financial performance. Researchers like Hermlin and Weisbach (2023) have argued that the effectiveness of corporate governance is more dependent on the functioning and collaboration of the board members than on the sheer number of members. For firms in emerging markets like Rwanda, where corporate governance practices are evolving, these insights suggest that a strategic focus should be placed on optimizing board composition to adapt to dynamic market conditions while improving financial performance. By balancing the growth of governance structures with the ability to adapt to market needs, companies can better navigate the complexities of governance and drive better financial outcomes.

5. Conclusion and Recommendations

5.1 Conclusion

The study concluded that while there was a positive correlation between board size and financial performance among companies listed on the Rwanda Stock Exchange (RSE), the relationship is more complex than it initially appears. Despite larger boards potentially offering more diverse expertise and resources, the study found that board size could also lead to inefficiencies, such as slower decision-making and coordination challenges, which negatively impacted financial performance. This highlights the need for companies to focus on optimizing the composition and functionality of their boards rather than simply increasing their size. In emerging markets like

Rwanda, where corporate governance practices are evolving, the study emphasizes the importance of ensuring that boards are effective in overseeing management and making timely decisions to enhance financial outcomes

5.2 Recommendations

Based on the study findings, the following recommendations are made:

1. Companies listed on Rwanda Stock Exchange should prioritize optimizing their board composition rather than simply increasing board size. This can be achieved by selecting directors with diverse expertise, experience, and backgrounds. The focus should be on creating boards that bring value through effective collaboration and decision-making, rather than larger boards that may introduce inefficiencies. By focusing on the quality of board members and their ability to work together cohesively, organizations can improve their governance structures and enhance financial performance.
2. Corporate governance bodies and regulatory authorities should encourage organizations to enhance their governance practices to promote efficient decision-making. This could involve establishing clear communication channels, defining roles and responsibilities, and fostering a culture of collaboration. By addressing coordination challenges, organizations can prevent inefficiencies, improve board performance, and positively impact financial outcomes. Regulatory frameworks should also consider providing guidelines that help organizations balance board size and effectiveness.
3. Leadership should implement regular evaluations of board effectiveness to assess how well the governance structure is functioning. This would help identify any issues with board dynamics or decision-making and allow leadership to make adjustments when necessary. Regular reviews will ensure that the board is adaptable to evolving market conditions and capable of driving long-term financial performance. Furthermore, leadership should foster a board culture that encourages open communication, accountability, and the use of diverse perspectives to drive strategic decisions.

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